What is claimed is:

1. A catalyst support for selective gas phase reactions in a tubular fixed bed reactor comprising a metallic monolith having channels the walls of which are adapted to receive a catalytically active phase or an intermediate layer acting as a carrier for a catalytically active phase.

2. A catalyst support according to claim 1 wherein the channels are substantially parallel to the longitudinal axis of the monolith.

3. A catalyst support according to claim 1 or 2 wherein the perpendicular cross section of each channel forms a cell delimited by a closed line represented by the perimeter of the cross section of the channel walls.

4. A catalyst support according to any of claims 1 to 3 wherein the shape of each cell perimeter is regular.

5. A catalyst support according to claim 4, wherein said shape is square, triangular, hexagonal or circular.

6. A catalyst support according to any of claims 1 to 3 wherein the shape of each cell perimeter is irregular.

7. A catalyst support according to any of claims 1 to 6, wherein the cell density is at least 3 cells/cm^2.

8. A catalyst support as claimed in claim 7 wherein the cell density is between 8 and 100 cells/cm^2.

9. A catalyst support according to any of claims 1 to 8 wherein the size of the cells is less than 5 mm.

10. A catalyst support according to claim 9 in which the size of the cells is between 1 and 3 mms.

11. A catalyst support according to any of claims 1 to 10 wherein the volume fraction of the metallic support is less than 0.9.

12. A catalyst support according to claim 11 wherein the volume fraction of the metallic support is between 0.15 and 0.6.

13. A catalyst support according to any of claims 1 to 12 wherein the surface area per unit volume of the monolith is at least 6 cm^2/cm^3.

14. A catalyst support according to claim 13 wherein the surface area per unit volume of the monolith is at least 10 cm^2/cm^3.

15. A catalyst support according to any of claims 1 to 14, wherein the length of the monolith is at least 5 cms.

16. A catalyst support according to claim 15 wherein the length of the monolith is in the range 30 cms to 1 m.

17. A catalyst support according to any of claims 1 to 16 wherein the metallic structure formed by the channel walls of the monolith is continuous.

18. A catalyst support according to any of claims 1 to 17, made of a metal chosen from copper, aluminum, nickel and alloys thereof.

19. A catalyst support according to any of claims 1 to 17, made of an alloy comprising predominantly iron, chromium and aluminum.

20. A catalyst support according to any of claims 1 to 19 wherein the surface of the monolith is covered by an intermediate layer acting as a carrier for a catalytically active compound.

21. A catalyst support according to claim 20, wherein the intermediate layer is made of material selected from aluminum hydroxides, aluminum oxide-hydroxides, alumina, silica, zirconia, titania, magnesia, pumice, diatomaceous earth zeolites and their mixtures.

22. Process for making a catalyst support according to any of claims 1 to 21, comprising extrusion of metals or metallic powders, folding and/or stacking metallic foils or sheets.

23. Process for making a catalyst support according to any of claims 1 to 22, wherein the intermediate layer is deposited on the surface of the monolith by a washcoating technique.

24. A catalyst comprising a catalyst support according to any of claims 1 to 21 and catalytically active material deposited on the walls of the channels, optionally with said intermediate layer.

25. A tubular reactor filled with a catalyst according to claim 24, wherein the walls of the monoliths are in contact with the wall of the reactor.

26. Use of a catalyst according to claim 24 for a selective gas-phase exothermic reaction.

27. Use according to claim 26, wherein the gas phase exothermic reaction is the selective chlorination and/or oxychlorination of alkenes or alkanes or the selective oxidation of alkenes.

28. Use according to claim 27, wherein the reaction is selected from the conversion of ethylene with chlorine to 1,2-dichloroethane; the conversion of ethylene with hydrogen chloride with air or oxygen to give 1,2-dichloroethane; the conversion of ethane with hydrogen chloride with air or oxygen to give a saturated or unsaturated chlorinated hydrocarbon, preferably 1,2-dichloroethane or vinyl chloride; and the reaction of methane with chlorine.

29. Use according to claim 27 or 28, wherein the catalyst for the oxychlorination reaction of ethylene contains copper in a amount of 1 to 12 wt % of the intermediate layer.

30. Use according to claim 29, wherein the catalyst also comprises at least one alkali metal, alkaline earth metal, group IIB metal or lanthanide in a total amount up to 6 wt% of the intermediate layer.

31. Use according to claim 27 or 28, wherein the catalyst for the oxychlorination reaction of ethane contains in the intermediate layer copper and an alkali metal in the atomic ratio 2:8.

32. Use according to claim 31, wherein the catalyst also comprises at least one alkaline earth metal, group IIB metal or lanthanide.

33. Use according to claim 27, wherein the catalyst for the selective oxidation reaction of ethylene comprises at least silver, and at least one alkali and/or alkaline earth metal.

34. Use of a catalyst according to claim 24 for a selective gas-phase endothermic reaction.